

Flora Paganelli

JPL Affiliate, UCLA Research Assistant

Cassini Radar Team Affiliate Member

Education

Dip. Informatics, Peano Technical Institute, IT (1987)

B.Sc., Geology, Torino University, Department of Earth Sciences, IT (1993)

M.Sc., GIS and Remote Sensing, International Training Center (ITC), Division of Geological Survey, NL (1996)

Ph.D., Remote Sensing, University of Alberta, Dept. Earth and Atmospheric Sciences, CA (2002)

Research Interests

Titan's structural mapping and implication of lineaments trends and Titan's global stress field during satellite evolution. Cassini SAR imaging data processing and analysis, geological and structural mapping with GIS integrated database. Satellites stress analysis.

Cassini SAR and radiometry studies of Titan's surface for geological and geophysical mapping. SAR backscattering and frequency-dependent dielectric of Titan's surface. Titan's surface studies by integration of Cassini RADAR/VIMS/ISS data.

In-SAR data analysis of interferometric properties of distributed and partially distributed scatterers (PS) using SIR-C/ENVISAT ASAR to study volcanic activity. GIS mapping and deformation model analysis.

Professional Experience

2009 – present Affiliate NASA Jet Propulsion Laboratory / UCLA

2008 – present Research Scientist Associate Proxemy Research Inc., MD

2007 – 2008 Visiting Research Associate, European Center for Geophysics and Seismology (ECGS), Walferdange, LU

2004 - 2007 NRC Resident Research Associate, NASA Jet Propulsion Laboratory

2003 - 2004 Research Associate, Geological Survey of Canada (GSC), CA

2002 - 2003 Visiting Research Associate Canada Centre for Remote Sensing (CCRS), CA

Selected Publications

Planetary Science

- Paganelli, F.**, M.A. Janssen, R. M. Lopes, E. Stofan, S.D. Wall, R.D. Lorenz, J.I. Lunine, R.L. Kirk, L. Roth, C. Elachi, and the Cassini Radar Team. 2008. Titan's surface from the Cassini RADAR radiometry data during SAR mode. *Planetary and Space Science* 56, 100-108.
- Lorenz, R.D., R. M. Lopes, **F. Paganelli**, J.I. Lunine, R.L. Kirk, L.A. Soderblom, E.R. Stofan, G. Ori, M. Myers, H. Miyamoto, B. Stiles, S.D. Wall, C. A. Wood and the Cassini RADAR Team. 2008. Fluvial Channels on Titan: Meteorological Paradigm and Cassini RADAR Observations. *Planetary and Space Science*, 56 (2008) 1132–1144.
- Paganelli, F.**, M.A. Janssen, B. Stiles, R. West, R.D. Lorenz, J.I. Lunine, S.D. Wall, P. Callahan, R. M. Lopes, E. Stofan, R.L. Kirk, W.T.K Johnson, L. Roth, C. Elachi, and the Cassini Radar Team. 2007. Titan's surface from the Cassini Radar SAR and high-resolution radiometry data of the first five flybys. *Icarus* 191, 211-222.
- Le Mouélic, S. P., Paillou, M.A. Janssen, J. W. Barnes, S. Rodriguez, C. Sotin, R.H. Brown, K.H. Baines, B.J. Buratti, R.N. Clark, M. Crapeau , P. Encrenaz, R. Jaumann, D. Geudtner, **F. Paganelli**, L. Soderblom, G. Tobie1, S. Wall. 2007. Joint analysis of Cassini VIMS and RADAR data: Application to the mapping of Sinlap crater on Titan. *JGR*, doi:10.1029/2007JE002965.
- Stofan, E.R., J.I. Lunine, R. Lopes, **F. Paganelli**, R.D. Lorenz, C.A. Wood, R. Kirk, S. Wall, C. Elachi, L.A. Soderblom, S. Ostro, M. Janssen, J. Radabaugh, L. Wye, H. Zebker, Y. Anderson, M. Allison, R. Boehmer, P. Callahan, P. Encrenaz, E. Flamini, G. Francescetti, Y. Gim, G. Hamilton, S. Hensley, W.T.K. Johnson, K. Kelleher, D. Muhleman, G. Picardi, F. Posa, L. Roth, R. Seu, S. Shaffer, B. Stiles, S. Vetrella, and R. West. 2006. Mapping of Titan: Results from the first Titan Radar Passes. *Icarus* 185, 443-456.
- Lorenz, R.D., S. Wall, J. Radabaugh, G. Boubin, E. Reffet, M. Janssen, E. Stofan, R. Lopes, R. Kirk, C. Elachi, J. Lunine, **F. Paganelli**, L. Soderblom, C. Wood, L. Wye, H. Zebker, Y. Anderson, S. Ostro, M. Allison, R. Boehmer, P. Callahan, P. Encrenaz, G.G. Ori, G. Francescetti, Y. Gim, G. Hamilton, S. Hensley, W. Johnson, K. Kelleher, K. Mitchell, D. Muhleman, G. Picardi, F. Posa, L. Roth, R. Seu, S. Shaffer, B. Stiles, S. Vetrella, E. Flamini, and R. West. 2006. The Sand Seas of Titan: Cassini RADAR Observations of Equatorial Fields of Longitudinal Dunes. *Science* 312, 724-727.

Earth Remote Sensing

Paganelli, F., Grunsky, E.C., and Richards, J.P., and Pryde, R. 2003. Use of RADARSAT-1 Principal Component imagery for structural mapping: a case study in the Buffalo Head Hills area, northern central Alberta, Canada. *Canadian Journal of Remote Sensing* 29(1), 111-140.

Paganelli, F., Richards, J.P., and Grunsky, E.C. 2002a. Integration of structural, gravity and magnetic data using the weights of evidence method as a tool for kimberlite exploration in the Buffalo Head Hills area, northern central Alberta, Canada. *Natural Resources Research* 11(3), 219-236.

Paganelli, F. and Rivard, B. 2002. Contribution of the integration of RADARSAT-1 and seismic imagery interpretation in the structural geology of the Central Alberta Foothills, Canada, as aid for oil and gas exploration. *Canadian Journal of Remote Sensing* 28(5), 686-700.